

Serial No.: 09/646,773
Atty. Docket No.: 120360.00145
Reply to Office Action of August 4, 2004

R E M A R K S

In view of the above amendments and foregoing remarks, favorable reconsideration in this application is respectfully requested. By this Amendment, claims 1-22 were amended and claims 23-25 added. Accordingly, claims 1-25 remain pending in the application, including independent claims 1, 10, 17, and 22.

Claim Rejection – 35 U.S.C. §§102, 103

The Examiner rejects claims 1-6, 8, 10-15, 17-19, 21, and 22 as anticipated or obvious over Panech (U.S. Patent No. 5,657,358). The Examiner rejects claims 7, 16, and 20 under 35 U.S.C. § 103 as unpatentable over Panech in view of Nagano (U.S. Patent No. 5,808,463). The Examiner rejects claim 9 under 35 U.S.C. § 103 as unpatentable over Panech and Stuart (U.S. Patent No. 5,666,648).

The present invention is a packet switching network having a control station and mobile terminals that communicate with the control station over a wireless link. The control station generates a plurality of data channels that carry the data packets, and a separate control channel that carries control information pertaining to the data channels. The data channels and the control channel are transmitted to the mobile terminals as an aggregate signal. The data and control information are in different carriers (*i.e.*, different RF frequencies), the aggregate carrier being transmitted in frames (page 3 lines 22-24). The terminals have a receiver to receive the aggregate signal, an ADC for digitizing the received signal, and a buffer for storing the digitized received signal. The terminals monitor the

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control channel and process the stored signal from the data channels in response to the control information on the control channel.

In response to Applicants' arguments, the Examiner indicates that Panech discloses the use of packets. (Office Action, ¶22.) However, the use of data or even data packets does not make the system a "packet-switched" system, as presently claimed. Without intending to limit the scope of the claims, Applicants' note that a packet-switched system is generally one where packets are routed separately through the system. In contrast, a circuit-switched system is generally one where a communication circuit or path is dedicated to those communication participants.

It is clear that Panech is a circuit-switched system since it utilizes "time division circuits between a base station and a plurality of subscriber stations." (Col. 1, lines 26-29.) According to Panech, the circuits are established, the information is transmitted on the assigned channel, and the channel is broken down after completion of the transmission. (Figs. 4, 10, 11; col. 28, line 11 to col. 29, line 59.) These are defining features of circuit-switched communications, and the examples cited by the Examiner do not teach or suggest a "packet-switched" system of the claimed invention.

The Examiner indicates that the Applicants do not claim the control information being in the same frame as the data packet, and therefore does not give Applicants' arguments any patentable weight. (Office Action, ¶20.) Applicants note, however, that the control information being in the same frame as the data packet is set forth in dependent claim 2. More importantly, however, the Examiner fails to address the crux of Applicants' argument – that Panech does not teach that control information and data packets are stored at the

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terminal. Only the present invention teaches storing the data channels and the control channel, and then extracting the desired data channels from that stored information depending on the control information in the control channel. Panech does not teach or suggest a terminal having a buffer that stores both control and data packets, and then processes the data packets that are stored in the buffer in accordance with the control information.

The Examiner further indicates that the Applicants do not claim the use of reverse data channels, and therefore does not give Applicants' arguments any patentable weight. (Office Action, ¶20.) Yet, Applicants' do not assert that the feature of using reverse data channels is claimed. Rather, Applicants were merely pointing out that one advantage to having the packet-switched data communication system of the claimed invention – as compared to the circuit-switched communication system of Panech – is that the claimed invention achieves a greater flexibility in that it can support multiple access methods. Although this features is not particularly claimed, it one advantage that the claimed packet-switched system has over Panech.

The Examiner further indicates that the Applicants do not claim the use of FDM, and therefore does not give Applicants' arguments any patentable weight. (Office Action, ¶20.) Applicants' note that the claimed system has carriers forming the data channels and a separate carrier forming the control channel. Accordingly, the present invention separates the control information into its own carrier, so that the terminal continually monitors (as further claimed) every frame of the control channel signal. In addition, claim 15 has been amended to more particularly point out that the control carrier is at a frequency that is substantially in the center of the RF signal. (See, for instance, page 10, lines 5-7.)

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Though the Examiner contends the RCC is monitored at every frame or continuously monitored (Office Action, ¶23), the Panech disclosure (column 55, lines 31-41) only provides that the base station is always in the frame search mode. Panech does not teach or suggest that the subscriber station continually monitors the RCC. Yet, the claimed invention requires that the continual monitoring occur at the remote terminal, not the control station. That would include, for instance, when the remote is receiving on a data channel.

The present invention (as claimed) separates the control information into its own carrier which is monitored continually by all terminals assigned to that control carrier. This is true even while the terminals are in communications sessions (claims 23-25). The control carrier is used to identify and describe the nature of the packets simultaneously carried on the data carriers. Data and associated control information are sent in the same frame within the radio frequency carrier. This allows the transmission bandwidth to be dynamically assigned to different parties on a frame-by-frame basis.

In contrast, the RCC of Panech cannot be monitored at the subscriber station when it is in a connected state (*i.e.*, receiving on a voice channel which is in a separate frequency). The terminal normally operates on only one frequency at a time (col. 10, line 38), and “[o]nly one RCC is operable at any given time in the entire system.” (Col. 15, lines 21-22.) The RCC is used to send messages allowing the set-up and break-down of circuits, which occurs before and after the connected phase of the communication. Consequently, the subscriber station does not continually monitor the control information, as in the claimed invention.

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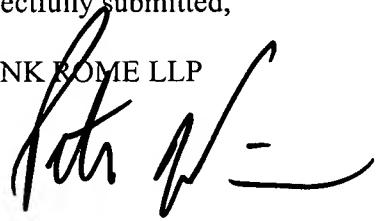
In the event there are any questions relating to this Amendment or to the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that the prosecution of this application may be expedited.

Please charge any shortage or credit any overpayment of fees to BLANK ROME LLP, Deposit Account No. 23-2185 (120360.00145). In the event that a petition for an extension of time is required to be submitted herewith and in the event that a separate petition does not accompany this response, Applicants hereby petition under 37 CFR 1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized above.

Respectfully submitted,

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